

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF HAWAII

STEPHANIE RODRIGUEZ; SAMUEL)	CIVIL NO. 08-00189 SOM/BMK
OYOLA-PEREZ; JULIUS RIGGINS;)	
and NILDA MEYER, Individually)	ORDER DENYING MOTION TO
and as personal)	PRECLUDE PLAINTIFFS' EXPERT'S
representative of the estate)	TESTIMONY (DOCKET NO. 338);
of Wilfredo Dayandante)	ORDER DENYING MOTIONS FOR
)	SUMMARY JUDGMENT (DOCKET NOS.
Plaintiffs,)	283 AND 285)
)	
vs.)	
)	
GENERAL DYNAMICS ARMAMENT AND)	
TECHNICAL PRODUCTS, INC., et)	
al.,)	
)	
Defendants.)	
)	

ORDER DENYING MOTION TO PRECLUDE PLAINTIFFS'
EXPERT'S TESTIMONY (DOCKET NO. 338); ORDER DENYING
MOTIONS FOR SUMMARY JUDGMENT (DOCKET NOS. 283 AND 285)

I. INTRODUCTION.

This action arises out of a premature explosion of a mortar cartridge (the ammunition) while still inside a mortar (the gun) during Army training exercises at the Pohakuloa Training Area on the Big Island of Hawaii on March 10, 2006. This explosion killed Oscar Rodriguez and injured Samuel Oyola-Perez, Julius Riggins, and Wilfredo Dayandante. The cause of the explosion has not been conclusively determined given the destruction of the mortar cartridge in the explosion. The parties agree that the explosion was caused by either a defect in the mortar cartridge or human error.

On September 25, 2009, Plaintiffs filed a Second Amended Complaint, asserting claims for negligence (Counts VI-X) and strict liability (Counts I-V), and claiming that the res ipsa loquitur doctrine applied to their negligence and strict liability claims (Counts XI-XX). Plaintiffs also seek punitive damages (Count XXI). Stephanie Rodriguez is a named Plaintiff in this case given the death of Rodriguez, her husband and the father of her child, in the explosion. Nilda Meyer is a named Plaintiff given the injury caused by the explosion to her son, Dayandante, who has subsequently died. At the hearing, Plaintiffs indicated that they will be dismissing the wrongful death claims with respect to Dayandante and all punitive damage claims.

Martin Marietta Aluminum Sales, Inc. ("MMASI"), the predecessor of Defendant General Dynamics Armament and Technical Products, Inc. ("GDATP"), was responsible for loading, assembling, and packaging mortar cartridges pursuant to the government's design and specifications. Plaintiffs are not claiming that the design and/or specifications for the mortar cartridge were deficient. Instead, Plaintiffs contend that the cartridge that prematurely exploded did not, in fact, comply with the design and specifications issued by the government.

Plaintiffs seek to hold GDATP liable for an alleged defect in the cartridge caused by its predecessor, MMASI. GDATP

has filed two motions for summary judgment. One seeks summary judgment on the merits of Plaintiffs' negligence, strict liability, and res ipsa loquitur claims. See Docket No. 285. In essence, this motion argues that Plaintiffs cannot prove that a defectively manufactured mortar cartridge caused the explosion. On this motion for summary judgment, the court must view the facts and reasonable inferences in the light most favorable to Plaintiffs. So viewing the record, the court finds questions of fact as to whether the explosion was caused by a defectively manufactured mortar cartridge. To the extent GDATP seeks summary judgment on the merits of Plaintiffs' negligence and strict liability claims, these questions of fact preclude summary judgment. However, the court grants GDATP's motion to the extent it seeks summary judgment on the res ipsa loquitur claims. Plaintiffs' res ipsa loquitur claims are duplicative of their negligence and strict liability claims. While Plaintiffs may not maintain independent res ipsa loquitur claims, this ruling does not preclude them from relying on the res ipsa loquitur doctrine in seeking to prove their negligence and strict liability claims at trial.

GDATP's other motion for summary judgment argues that the government contractor defense, the political question doctrine, and the combatant activities exception bar Plaintiffs' claims. See Docket No. 283. Given the question of fact as to

whether MMASI built the mortar cartridge in compliance with the government's design and specifications, GDATP is not entitled to summary judgment based on the government contractor defense. Because the political question doctrine and combatant activities exception are not applicable, summary judgment is also denied to the extent GDATP sought summary judgment based on those doctrines.

After GDATP filed its motions for summary judgment, it sought to exclude the opinions of Plaintiffs' expert, John R. Nixon. See Docket No. 338. Because Nixon's opinions are both admissible and reliable, the court denies the motion to exclude his opinions. The court notes that GDATP appears to believe that Plaintiffs cannot demonstrate causation without Nixon's opinions. However, even putting aside Nixon's opinions, the court finds a question of fact as to whether the explosion was caused by the defective manufacture of the mortar cartridge.

II. BACKGROUND.

There is no dispute that this case arises out of an "in-bore" or in-the-gun explosion of an 81mm M374A3 (High Explosive) mortar cartridge during a live-fire United States Army training exercise at the Pohakuloa Training Area on the Big Island of Hawaii on March 10, 2006. Plaintiffs allege that the cartridge (the ammunition) exploded in the mortar (the "gun" used to fire the ammunition), rather than exploding after it left the

mortar as it was designed to do. See 2d GDATP Concise Statement ¶ 1 (Docket No. 285). There is no dispute that this explosion killed Rodriguez and injured Riggens, Dayandante, and Oyola-Perez. See 2d GDATP Concise Statement ¶ 2.

The parties have stipulated "that the mortar shell in question was manufactured in 1982 at the Milan, Tennessee Army Ammunition Plant, and that GDATP is the successor entity responsible for products made during that timeframe in the event the jury finds any potential liability related to the mortar shell at issue." See Plaintiffs' Stipulation for Dismissal Without Prejudice As to Defendant Lockheed Martin Corporation ¶ 9 (March 30, 2009) (Docket No. 65).

The cartridge at issue was part of Lot No. MA-82H153-005. See Affidavit of Patrick Lootens ¶ 6 (Jan. 11, 2010). The cartridge was supposed to be designed, manufactured, and inspected pursuant to detailed government requirements. See generally Sealed Ex. D to Declaration of John Reyes-Burke Regarding Omnibus Exhibits (Jan. 28, 2010).

Plaintiffs are not asserting that the cartridge was defectively designed, but are instead claiming that the cartridge was defectively manufactured. See Memorandum in Opposition to Defendant GDATP's Motion to Exclude the Opinions of Plaintiffs' Expert John R. Nixon at 28 (Feb. 22, 2020) ("Plaintiffs have pled a manufacturing defect case."). That is, Plaintiffs are claiming

that MMASI did not actually produce the mortar cartridge according to the government's detailed requirements.

Patrick Lootens, the U.S. Army Procuring Contracting Officer for the Milan, Tennessee Army Ammunition Plant, states, "The 81mm M374A3 mortar cartridge is an item of ammunition that has no civilian counterpart and was loaded, assembled and packaged solely for use by the United States Government in training and combat operations." Lootens Aff. ¶¶ 3, 8. Lootens says that the mortar shell "is a single purpose, single use product which is designed to function upon impact, and by its nature, it cannot be individually field tested." Id. ¶ 8. GDATP has admitted that the mortar cartridge was not designed to and was not supposed to explode inside the mortar. See Defendant General Dynamic Armament and Technical Products, Inc.'s Responses to Plaintiffs' First Request for Admissions, Nos. 6 and 7.

In 1982, the government took possession of the lot of cartridges containing the one that prematurely blew up. See Looten Aff. ¶ 29-31; Plaintiffs' First Request for Admissions, No. 22 ("GDATP admits that the United States Government accepted the relevant lot of mortar shells . . . on October 14, 1982"). The lot consisted of 12,967 cartridges. Before the cartridge at issue in this case exploded in March 2006, approximately 10,000 of those cartridges were fired without incident, meaning that approximately 3,000 cartridges from the lot remained after the

incident. Id. ¶ 21-22; see also Finalization Letter for Malfunction Investigation MIF-A-002-2006-1 (attached as Ex. J to 2d GDATP Concise Statement at RIA 00311).

There is no dispute that the government stored the cartridge at issue after taking possession of it in 1982. The record does not clearly establish where the mortar cartridge at issue was stored. GDATP has indicated that portions of the lot of mortar cartridges were stored in Arkansas, Alabama, Hawaii, Iraq, and Europe. See Plaintiffs' First Request for Admissions, No. 20. GDATP's Expert, Vincent Di Ricco, testified that this long-term storage of the cartridge would likely not have affected the cartridge in a meaningful way. See Videotaped Deposition of Vincent Di Ricco at 241 (Dec. 2, 2009) ("A round within the mortar pack is likely to pretty much stay just the way it was as it came out of the plant.").

The U.S. Army Armament, Research, Development and Engineering Center's Malfunction Investigation Team conducted an investigation into the explosion. See Looten Aff. ¶ 34; see also Ex. J to 2d GDATP Concise Statement. As part of that investigation, the Army inspected and x-rayed 119 cartridges from the same lot (23 rounds that were at the site at the time of the incident and 96 rounds from storage), determining that all of those cartridges were without defect and met government

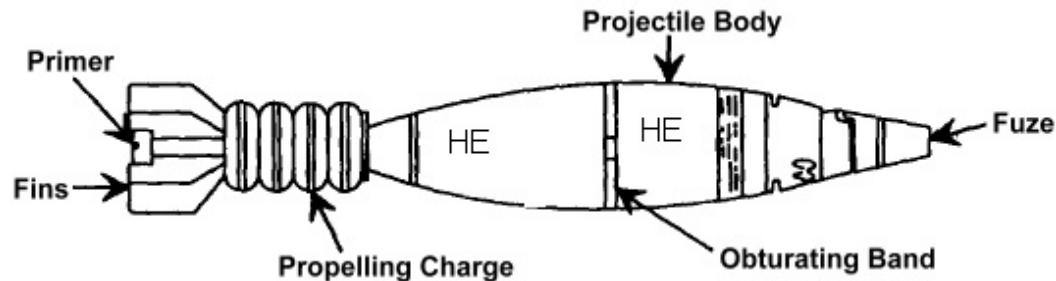
specifications. See Looten Aff. ¶ 34; Ex. J at RIA 312 to RIA 315.

The Army determined that the explosion at issue here was an "in-bore" explosion in the upper section of the tube and that there was no explosive residue or projectile fragment around the mortar's position. See Ex. J at RIA 317.

GDATP's expert, Di Ricco, testified based on his review that it was "very obvious" that the explosion was a low-order detonation. See Di Ricco Depo. at 70-71. A low-order detonation occurs when ordnance detonates in a manner that results in a lower yield than is expected from that type of ordnance. Plaintiffs' expert, John Nixon, agrees that this case involves a low-order detonation. See Nixon Depo. at 209 (Dec. 2, 2009). Philip Leong, an Engineering Supervisor with the Army's Armament Research Engineering Development Center, also thought the explosion was a low-order event. See Deposition of Philip Leong at 3, 44, 78, 83 (Nov. 16, 2009).

The parties have agreed that the diagram of a generic mortar cartridge set forth below generally represents the location of the various component parts that are at issue in this case. To avoid any potential disclosure of classified or otherwise confidential information, the court is not using an actual diagram from the record in this case, but instead uses this generic diagram to aid any reader of this order in

understanding what is being said. The court has deleted illegible writing on the diagram and replaced it with "HE" to indicate locations containing high explosives.



See 81 mm Mortar Ammunition and Fuze,

<http://www.inetres.com/qp/military/infantry/mortar/81mm.html>

(last visited March 3, 2010).

The Army's investigation report of the incident in this case identified the following possible causes of the premature detonation:

- 1) pre-armed fuze¹--leads to a high order detonation 20-50 feet from tube and no weapon damage. See Ex. J at RIA 316. The Army's investigation found the pre-armed fuze scenario "very unlikely," as the cartridge would have exploded outside of the mortar. See Ex. J at RIA 328.
- 2) explosive defects (high explosive filler with defect cavitation² greater than one-

¹"Fuze" is a variant of "fuse" that is often used to refer to a "mechanical or electric mechanism used to detonate an explosive charge or device such as a bomb or grenade." American Heritage Dictionary 714 (4th ed. 2006).

²"Cavitation" is a void in the high explosive. Philip Leong, who is an engineering supervisor for the Army, says that the void is created during the pouring of the high explosive into

square inch)--leads to in-bore detonation in the lower section of the tube. See Ex. J at RIA 316. The Army's investigation found the explosive defects scenario "very unlikely," as explosive defects lead to in-bore detonations at the bottom of the tube, not the mid- to upper-part of the tube. See Ex. J at RIA 328.

3) material defects (cracked projectile body below the obturator)--leads to low order, in-bore detonation in lower- to mid-section of tube; large fragments of the tube or cartridge and high explosive (Comp B) residue can be found around the mortar's position. See Ex. J at RIA 316. The Army's investigation found the material defects scenario "unlikely." The investigation noted that some evidence supported a material defect as the cause: the explosion occurred at about the mid-section of the tube, and explosive residue was found on mortar fragments. However, other evidence did not support an explosive defect: there were no cartridge fragments or explosive chunks and there was no high pressure wave. See Ex. J at RIA 328.

4) material defects (cracked projectile body above the obturator)--does not cause in-bore detonation. See Ex. J at RIA 316.

5) single round with bore obstructions (the fired cartridge hit something in the tube, such as a cleaning rod)--leads to a low-order, in-bore detonation in the mid- to upper-section of the tube; and large fragments of the tube or cartridge and high explosive (Comp B) residue can be found around the mortar's position. See Ex. J at RIA 316. The Army's investigation found the single round with bore obstructions scenario "possible." The investigation noted some supporting evidence: the explosion occurred

the body of the mortar cartridge. See Videotaped Deposition of Phillip Leong (Nov. 16, 2009) at 194-95.

at about the mid-section of the tube, and explosive residue was found on mortar fragments. However, other evidence was not supportive: there were no cartridge fragments or explosive chunks and there was no high pressure wave. See Ex. J at RIA 328.

6) two cartridges in the tube (when a misfired or stuck round is in the bottom of the tube and another round is dropped on it)--leads to a low-order, in-bore detonation of the bottom round, while the top round travels a short way down range; the mid- to upper-section of the tube is often destroyed; and large fragments of the tube or cartridge and high explosive (Comp B) residue can be found around the mortar's position. See Ex. J at RIA 316. The Army's investigation found this scenario "possible." The investigation noted some supporting evidence: the explosion occurred at about the mid-section of the tube and explosive residue was found on mortar fragments. The charred fuze windshield found at the scene might have been damaged when the top cartridge was dropped on it. The mortar had a loose firing pin, which could have led to a misfire. However, other evidence was not supportive: there were no cartridge fragments or explosive chunks, there was no high pressure wave, and there was no evidence of a misfire. See Ex. J at RIA 328.

7) one round in the tube with a second round being loaded just after firing but before the first round left the tube--leads to a low-order, in-bore detonation with the bottom round exploding in the tube and the second round traveling a short way down range; large fragments of the tube or cartridge and high explosive (Comp B) residue can be found around the mortar's position. See Ex. J at RIA 316. The Army's investigation found this scenario "very unlikely." Although evidence of a mid-section explosion and evidence of explosive residue were consistent with this scenario, no cartridge fragments or explosive chunks were found and no high pressure wave

occurred. Also, there was no evidence of rapid firing. See Ex. J at RIA 328.

The Army concluded that it could not "identify the exact cause of the malfunction incident," noting that it could not rule out the "double loading scenario." See Ex. J at RIA 317.

Plaintiffs' expert, John Nixon, submitted his expert report on November 22, 2009 (attached as Ex. C to GDATP's motion to exclude Nixon's opinions). After reviewing witness statements, depositions, and the Army's investigation report, Nixon opined, to a reasonable degree of scientific certainty, that the explosion at issue here was caused by a defect in the cartridge body below the obturator, excessive voiding or cracking of the high explosive filling, or a foreign body in the high explosive filling. Nixon's Expert Report at 18. However, Nixon could not positively identify the cause of the accident. See Videotaped Deposition of John Nixon at 70 (Dec. 2, 2009).

GDAPT's expert, Di Ricco, testified that the premature detonation of the cartridge was caused by either a defect or human error. See Di Ricco Depo. at 56. Di Ricco stated that the exact cause of the premature detonation could not be determined because the evidence was destroyed in the explosion. Id. at 57. Based on the facts he had and the history of previous premature explosions, he opined, to a reasonable degree of scientific certainty, that the premature explosion had been caused by double loading, meaning that, for some reason, a cartridge was already

in the tube when another was dropped into it. Id. at 57, 60, 70. Di Ricco did not think that the fuze had anything to do with the explosion. Id. at 106.

GDAPT's other expert, Peter J. Czachorowski, testified that a premature in-bore detonation of a cartridge is something that is not supposed to happen, and that a soldier who fires a cartridge out of a mortar is entitled to reasonably expect that the cartridge will not detonate in the mortar. See Videotaped Deposition of Peter J. Czachorowski at 49 (Jan. 21, 2010). Czachorowski agreed that the premature in-bore detonation of a mortar cartridge would not occur absent a defect in the cartridge or some type of human error. Id. Czachorowski testified that, absent human error, if the cartridge was manufactured according to specifications, it would not detonate inside the mortar. Id. at 50. The government's specifications expressly required, "There shall be no premature burst in the gun bore or in flight." See Sealed Ex. D at RIA 00050.

Oyola-Perez, who was injured during the explosion, says that double loading was not the cause of the explosion. See Affidavit of Samuel Oyola-Perez ¶ 12 (Feb. 10, 2010) ("The mortar shell malfunction did not result from double loading because I was there and saw that no double loading occurred."). While investigating the cause of the explosion, the Army conducted double load tests. None of the mortar shells exploded in the

mortar during these double load tests. See Defendant General Dynamic Armament and Technical Products, Inc.'s Responses to Plaintiffs' First Request for Admissions, No. 15; Ex. J at RIA 00315.

III. THE MOTION TO EXCLUDE PLAINTIFFS' EXPERT'S OPINIONS IS DENIED.

Plaintiffs have submitted opinions of their expert, Nixon, and therefore have the burden of demonstrating the admissibility of his opinions. Lust By & Through Lust v. Merrell Dow Pharms., Inc., 89 F.3d 594, 598 (9th Cir. 1996) ("It is the proponent of the expert who has the burden of proving admissibility.").

Rule 702 of the Federal Rules of Evidence governs the admissibility of expert evidence in this court. See Clausen v. M/V New Carissa, 339 F.3d 1049, 1055 (9th Cir. 2003). Rule 702 allows the admission of expert testimony when scientific, technical, or other specialized knowledge will help the trier of fact understand the evidence or determine a fact in issue. Fed. R. Evid. 702.

In Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579, 589 (1993), the Supreme Court, focusing on the admissibility of scientific expert testimony, found that such testimony is admissible only if it is both relevant and reliable. In Kumho Tire Co. v. Carmichael, 526 U.S. 137, 146 (1999), the Court explained that the presiding judge's role (or gatekeeping

function) in ensuring the reliability and relevancy of expert testimony extends to all expert testimony. See also Clausen, 339 F.3d at 1056 (noting that district courts are "charged . . . with the responsibility of ensuring that proffered [expert] evidence is both relevant and reliable").

Daubert outlined nonexclusive factors, such as testing, peer review and publication, error rates, and acceptance in the relevant scientific community, some or all of which might help a court to determine the reliability of a particular scientific theory or technique. Daubert, 509 U.S. at 593-94. The Daubert test is "flexible," and the "list of specific factors neither necessarily nor exclusively applies to all experts or in every case. Rather, the law grants a district court the same broad latitude when it decides how to determine reliability as it enjoys in respect to its ultimate reliability determination."

Kumho, 526 U.S. at 141; see also Living Designs, Inc. v. E.I. Dupont de Nemours & Co., 431 F.3d 353, 369 (9th Cir. 2005) (noting that the inquiry envisioned by Rule 702 is a flexible one that must be tied to the facts of each particular case), cert. denied 129 S. Ct. 762 (2008); Elsayed Mukhtar v. Cal. St. Univ., Hayward, 299 F.3d 1053, 1064 (2002) (stating that the court "has broad latitude in determining whether an expert's testimony is reliable" and "in deciding how to determine the testimony's reliability"), as amended by 319 F.3d 1073 (9th Cir. 2003).

Under Daubert and Kumho, Nixon's testimony is admissible only if this court determines that he is qualified as an expert and that his testimony is reliable and relevant and will assist the trier of fact.

GDATP argues that Nixon is not qualified and that his opinions are unreliable and will not assist the trier of fact. This court rejects GDATP's argument, ruling that Nixon's opinions are admissible, pass the Daubert gatekeeping requirements, and are instead subject to vigorous cross-examination. See Dorn v. Burlington N. Santa Fe R.R. Co., 397 F.3d 1183, 1196 (9th Cir. 2005) ("The Supreme Court in Daubert v. Merrell Dow Pharmaceuticals, Inc., was not overly concerned about the prospect that some dubious scientific theories may pass the gatekeeper and reach the jury under the liberal standard of admissibility set forth in that opinion; indeed, the Court said, 'Vigorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof are the traditional and appropriate means of attacking shaky but admissible evidence.'" (quoting Daubert, 509 U.S. at 596)); S.M. v. J.K., 262 F.3d 914, 921 (2001) ("A court may admit somewhat questionable testimony if it falls within the range where experts might reasonably differ, and where the jury must decide among the conflicting views." (internal quotation and citation omitted)), as amended by 315 F.3d 1058 (9th Cir. 2003).

1. Nixon is Qualified.

There are four factors to consider in determining whether expert testimony will assist the trier of fact:

(i) whether the expert is qualified; (ii) whether the subject matter of the testimony is proper for the jury's consideration; (iii) whether the testimony conforms to a generally accepted explanatory theory; and (iv) whether the probative value of the testimony outweighs its prejudicial effect. Scott v. Ross, 140 F.3d 1275, 1285-86 (9th Cir. 1998); United States v. Calabrese, 825 F.2d 1342, 1348 (9th Cir. 1987).

According to Plaintiffs, they are offering Nixon's testimony "to support the theory that the particular cartridge in question contained manufacturing defects." See Memorandum in Opposition to Defendant GDATP's Motion to Exclude the Opinions of Plaintiffs' Expert John R. Nixon at 28. Nixon is not being offered to opine on any design defect, as Plaintiffs do not assert a design defect claim. Id. Nixon did no independent study regarding any information he relied on in forming his opinions for this case. Instead, Nixon relied on material supplied to him by Plaintiffs' counsel. See Videotaped Deposition of John Nixon at 95 (Dec. 2, 2009).

GDATP argues that Nixon lacks the requisite knowledge, skill, experience, training, and/or education to offer his

opinions on high explosive ordnance malfunctions--the first of the four factors regarding admissibility. This court disagrees.

The parties agreed that an evidentiary hearing was not needed on whether Nixon may provide opinions. The court therefore decides GDATP's motion to exclude his opinions based on the current record. Nixon's curriculum vitae indicates that he has a bachelor's degree in mechanical engineering from the University of Greenwich in London, England. See Ex. B to Motion to Exclude Expert Testimony. Nixon also took various courses at the Royal Military College of Science in England, which "included explosives technology, ordnance and munitions design, and extensive training in ballistics." Id. Nixon was employed by the United Kingdom Ministry of Defence, where he worked as a "General/Project Manager; Missiles and Explosives Department" from 1995 to 1999, as a "Project Manager; Guns Department" from 1992 to 1995, and as a "Project Manager; Ammunition Department" from 1990 to 1992.

Nixon has testified as an expert in approximately 40 to 50 matters. However, 70% to 80% of those cases involved handguns, rifles, and ballistics related to personal firearms. See Nixon Depo. at 198. Nixon has not testified as an expert on in-bore explosions with respect to any kind of high explosives. Id. at 200.

Nixon reviewed, although he did not himself investigate, an in-bore mortar malfunction in the early 1980s in which it was determined that the cause of the premature detonation was double loading. See Nixon Depo. at 107-08. Although constrained by the Official Secrecy Act of Great Britain from providing details, Nixon says he has developed ammunition and that, inevitably, when one develops ammunition, one gets "failures." Id. at 109. Nixon says that he gained personal experience with malfunctions while high explosive-loaded projectiles were being developed or reverse-engineered, and that he participated in ten or fewer malfunction investigations. Id. at 110, 112. Nixon concedes that he has not investigated mortars or materials designed in the United States, but contends that the causes of explosive malfunctions are essentially the same regardless of which country's design is being utilized. Id. at 112, 115.

Nixon demonstrates sufficient education, knowledge, and experience to state opinions regarding the cause of the mortar explosion in this case. Nixon has designed and reverse-engineered ammunition. He has examined why ammunition prematurely explodes. This indicates that he has an understanding of how ammunition works and what possible flaws might lead to a premature explosion. Nixon says that causes of failures in various types of ammunition are similar. Although

Nixon could not positively identify the cause of the premature cartridge explosion and has not testified as an expert on high explosive malfunctions in American ammunition, Nixon's opinions will "assist" the trier of fact by helping them to determine the cause of the explosion. GDATP's challenge to Nixon in this area goes to Nixon's credibility and is more properly the subject of cross-examination.

2. Nixon's Opinions Are Sufficiently Reliable.

Why the mortar cartridge prematurely exploded "in-bore," or in the mortar, is the subject of debate, as the destruction of the cartridge precludes an indisputable determination of cause. See De Ricco Depo. at 57. Experts are being proffered by both sides as to what caused the premature detonation.

Plaintiffs' expert, Nixon, opines that the premature detonation was caused by a defect in the cartridge body below the obturator, excessive voiding or cracking in the high explosive filling, or a foreign body in the high explosive filling. See Nixon's Expert Report at 18. GDATP argues that these opinions are insufficiently reliable to be admissible. This court disagrees.

GDATP initially argues that Nixon's opinions are not reliable because he did not perform any independent research, did not attempt to test his own theories, did not interview any

witness, did not conduct an on-site investigation or go to the scene of the accident, did not examine the fragments collected after the explosion, and did not attempt to determine whether the Army has had similar malfunctions. Daubert does not require Nixon to do any of these things. Testing of the opinion of any expert in this case, peer review, or a calculation of error-rate are procedures all hampered by the destruction of the mortar in question. To complicate matters, the Army has exclusive possession of the remaining mortars. Under these circumstances, an expert may reasonably base an opinion regarding the cause of the premature explosion on theoretical possibilities or on previous experience with similar ammunition.

Like the other experts in this case and the Army's investigators, Nixon tried to decide what could have caused the premature detonation based on the facts he was given, eliminating causes that did not fit the facts. Nixon's opinions are based on a technique generally accepted in the relevant expert community. See Kumho Tire, 526 U.S. at 141 (holding that Daubert's factors apply to testimony based on technical and specialized knowledge, not just to scientific knowledge).

Nixon's opinions are actually similar to the conclusions reached by the Army during its investigation. For example, the Army's investigators agreed that the premature detonation could have been caused by a defect in the cartridge

body below the obturator, though the Army thought this unlikely.

See Ex. J at RIA 316 and RIA 328. Other members of the Army appear to have agreed that a cracked mortar cartridge could have caused the explosion. See Ex. H to Plaintiffs' Memorandum in Opposition to Defendant GDATP's Motion to Exclude the Opinions of Plaintiffs' Expert John R. Nixon at ARMY0009 ("The board suspects that a crack or cracks existed in the body of the mortar cartridge between the obturator and the fin section. During the launch sequence, the composition B explosive was exposed to the burning propellant. This exposure resulted in the detonation of the round within the cannon."). The Army's investigators also thought it was possible, though "very unlikely," that the premature explosion resulted from high explosive filler with a defect cavitation greater than one square inch. See Ex. J at RIA 316 and RIA 328. GDATP's expert similarly appears to have excluded various causes based on the facts presented to him, ultimately opining that, absent human error, either a defect or double loading could have caused the explosion. See Di Ricco Depo. at 54-57.

The court is equally unpersuaded by GDATP's argument that Nixon's opinions should be excluded because he did not conduct independent research and instead developed his opinions expressly for this case.

In determining whether a proffer of scientific evidence is sufficiently reliable,

we have previously held that "[o]ne very significant fact to be considered is whether the experts are proposing to testify about matters growing naturally and directly out of research they have conducted independent of the litigation, or whether they have developed their opinions expressly for purposes of testifying." Daubert v. Merrell Dow Pharm., Inc., 43 F.3d 1311, 1317 (9th Cir. 1995) ("Daubert II"). If the testimony is not based on independent research then what is required is "proof that the research and analysis supporting the proffered conclusions have been subjected to normal scientific scrutiny through peer review and publication." Id. at 1318.

Clausen, 339 F.3d at 1056. As noted above, the cartridge was destroyed in the explosion, and the Army has exclusive control over the remaining cartridges. Under those circumstances, an opinion is not subject to automatic exclusion even if the expert did no independent research. Nixon's opinions fit the facts of this case and, even though Nixon cannot conclusively say what caused the explosion, his opinions are sufficiently reliable and will assist the trier of fact in determining what caused the explosion. All of GDATP's other arguments go to Nixon's credibility or the weight of the evidence, not to admissibility. GDATP's concerns are more properly the subject of vigorous cross-examination.

IV. THE MOTIONS FOR SUMMARY JUDGMENT ARE DENIED.

A. Summary Judgment Standard.

Summary judgment shall be granted when "the pleadings, the discovery and disclosure materials on file, and any affidavits show that there is no genuine issue as to any material fact and that the movant is entitled to judgment as a matter of law." Fed. R. Civ. P. 56(c).

One of the principal purposes of summary judgment is to identify and dispose of factually unsupported claims and defenses. Celotex Corp. v. Catrett, 477 U.S. 317, 323-24 (1986). Accordingly, "[o]nly admissible evidence may be considered in deciding a motion for summary judgment." Miller v. Glenn Miller Prods., Inc., 454 F.3d 975, 988 (9th Cir. 2006). Summary judgment must be granted against a party that fails to demonstrate facts to establish what will be an essential element at trial. See Celotex, 477 U.S. at 323. A moving party has both the initial burden of production and the ultimate burden of persuasion on a motion for summary judgment. Nissan Fire & Marine Ins. Co. v. Fritz Cos., 210 F.3d 1099, 1102 (9th Cir. 2000). The burden initially falls on the moving party to identify for the court "those portions of the materials on file that it believes demonstrate the absence of any genuine issue of material fact." T.W. Elec. Serv., Inc. v. Pac. Elec. Contractors Ass'n, 809 F.2d 626, 630 (9th Cir. 1987) (citing Celotex Corp., 477 U.S. at 323);

accord Miller, 454 F.3d at 987. "A fact is material if it could affect the outcome of the suit under the governing substantive law." Miller, 454 F.3d at 987.

When the moving party fails to carry its initial burden of production, "the nonmoving party has no obligation to produce anything." In such a case, the nonmoving party may defeat the motion for summary judgment without producing anything. Nissan Fire, 210 F.3d at 1102-03. On the other hand, when the moving party meets its initial burden on a summary judgment motion, the "burden then shifts to the nonmoving party to establish, beyond the pleadings, that there is a genuine issue for trial." Miller, 454 F.3d at 987. This means that the nonmoving party "must do more than simply show that there is some metaphysical doubt as to the material facts." Matsushita Elec. Indus. Co. v. Zenith Radio Corp., 475 U.S. 574, 586 (1986) (footnote omitted). The nonmoving party may not rely on the mere allegations in the pleadings and instead "must set forth specific facts showing that there is a genuine issue for trial." Porter v. Cal. Dep't of Corr., 419 F.3d 885, 891 (9th Cir. 2005) (quoting Anderson v. Liberty Lobby, Inc., 477 U.S. 242, 256 (1986)). "A genuine dispute arises if the evidence is such that a reasonable jury could return a verdict for the nonmoving party." California v. Campbell, 319 F.3d 1161, 1166 (9th Cir. 2003); Addisu v. Fred Meyer, Inc., 198 F.3d 1130, 1134 (9th Cir. 2000) ("There must be

enough doubt for a 'reasonable trier of fact' to find for plaintiffs in order to defeat the summary judgment motion.").

On a summary judgment motion, "the nonmoving party's evidence is to be believed, and all justifiable inferences are to be drawn in that party's favor." Miller, 454 F.3d at 988 (quotations and brackets omitted).

B. The Court Denies GDATP's Motion for Summary Judgment on Negligence and Strict Liability Claims, But Grants Summary Judgment on Res Ipsa Loquitur Claims Without Restricting Use of the Res Ipsa Loquitur Doctrine in Connection With Negligence or Strict Liability Claims (Docket No. 285).

GDATP essentially argues that it is unlikely that it caused a manufacturing defect that was responsible for the premature explosion of the mortar cartridge, and that summary judgment should therefore be granted in its favor. However, on a motion for summary judgment, this court must view the facts in the light most favorable to the nonmoving parties. When the facts are so viewed, the court finds some evidence that GDATP may have caused a manufacturing defect in the mortar cartridge. Given this genuine issue of fact, the court denies GDATP's motion for summary judgment on the merits of the negligence and strict liability claims.

1. Negligence Claims.

To prevail on a negligence claim, a plaintiff must prove: (1) a duty, or obligation, recognized by the law,

requiring a defendant to conform to a certain standard of conduct; (2) a failure on a defendant's part to conform to the standard required (a breach of the duty); (3) a reasonably close causal connection between the conduct and the resulting injury; and (4) actual loss or damage. Takayama v. Kaiser Found. Hosp., 82 Haw. 486, 498-99, 923 P.2d 903, 915-16 (1996); accord Kaho`ohanohano v. Dept. of Human Servs., 117 Haw. 262, 287 n.31, 178 P.3d 538, 563 n.31 (2008) ("It is well-established that, in order for a plaintiff to prevail on a negligence claim, the plaintiff is required to prove all four of the necessary elements of negligence: (1) duty; (2) breach of duty; (3) causation; and (4) damages."). Ordinarily, issues of negligence are not susceptible of summary judgment. However, when facts are undisputed or lend themselves to only one reasonable interpretation or conclusion, then a court is required to pass upon the question of negligence as a matter of law. Henderson v. Prof'l Coatings Corp, et al., 72 Haw. 387, 400, 819 P.2d 84, 92 (1991).

GDATP argues that, because Plaintiffs cannot point to any specific negligent act or omission on the part of MMASI, its predecessor, GDATP cannot be found negligent. See Nixon Depo. at 360 (testifying that he could not point to any specific act or omission in the manufacturing process of the shell at issue that contributed to its premature explosion). GDATP contends that, of

the more than 10,000 mortar cartridges that have been used from the lot that the mortar cartridge at issue here came from, the one at the heart of this case is the only one that has reportedly malfunctioned. GDATP also says that, of the 119 mortar cartridges examined after the incident, none had a defect. GDATP concludes that it is therefore highly unlikely that it caused a manufacturing defect, and that human error is more likely responsible for the explosion. GDATP's arguments are unconvincing in this summary judgment proceeding, which turns not on probability but on the absence of a question of fact. The lack of similar incidents or defects does not necessarily mean that the mortar cartridge at issue in this case was not defectively manufactured. See, e.g., Leong Depo. at 97 (stating that nothing can be learned about the cause of the premature explosion in this case merely because 10,000 cartridges had been previously fired without incident) and at 200 ("Q: Does the presence or absence--let's say the absence of cavitations from the rest of the lot indicate anything to you about the cartridge at issue? A: No.").

GDATP concedes that a mortar cartridge is not supposed to explode inside the mortar and will not explode unless it is defective or some type of human error has occurred. See Defendant General Dynamic Armament and Technical Products, Inc.'s Responses to Plaintiffs' First Request for Admissions, Nos. 6 and

7; Czachorowski Depo. at 49-50; Sealed Ex. D at RIA 00050. GDATP's own expert, Di Ricco, says that the premature detonation of the cartridge was caused by either a defect or human error. See Di Ricco Depo. at 56. In Di Ricco's opinion, the cause of the explosion cannot be conclusively determined because the cartridge was destroyed in the explosion. Id. at 57. Di Ricco opines that the cause of the explosion was likely human error, specifically double loading. Id. at 106. However, for purposes of this motion, GDATP does not establish that human error did indeed cause the explosion.

There is a genuine issue of fact as to whether the cause of the explosion was double loading. Plaintiffs have submitted evidence that tends to establish that double loading did not cause the explosion of the cartridge inside the mortar. Oyola-Perez, who was present when the mortar was loaded with the cartridge, says that double loading was not the cause of the explosion. See Affidavit of Samuel Oyola-Perez ¶ 12 (Feb. 10, 2010) ("The mortar shell malfunction did not result from double loading because I was there and saw that no double loading occurred."). Although GDATP correctly points out that a double load would typically be an inadvertent event and therefore something that Oyola-Perez would not have noticed, on this motion for summary judgment, this court interprets disputed facts in the light most favorable to Plaintiffs. See Miller, 454 F.3d at 988.

Moreover, while investigating the cause of the explosion, the Army conducted double load tests and could not recreate a mortar shell exploding inside the mortar during those tests. See Defendant General Dynamic Armament and Technical Products, Inc.'s Responses to Plaintiffs' First Request for Admissions, No. 15.

As GDATP's own experts concede, if the cause of the premature explosion of the cartridge was not human error, then the cause had to be some kind of defect in the cartridge. See Czachorowski Depo. at 49-50; Di Ricco Depo. at 56. That is, absent human error, the premature explosion of the cartridge was caused by a manufacturing defect or a defect that occurred after the cartridge left the ammunition plant. GDATP's own expert indicates that the cartridge was "likely to pretty much stay just the way it was when it came out of the plant." Di Ricco Depo. at 241. Assuming that the explosion was not caused by human error and that the cartridge was in the same condition as when it left the ammunition plant in 1982, and given the absence of any design defect, the only possible remaining cause is a manufacturing defect. Because the explosion might have resulted from a manufacturing defect, a question of fact exists that precludes summary judgment in favor of GDATP on the merits of the negligence claims.

GDATP argues that, even assuming a manufacturing defect, Plaintiffs will not be able to prove that GDATP, rather

than another government contractor, created the defect. In other words, GDATP argues that TriMas Corporation manufactured the metal parts of the cartridge, that Holston Defense Corporation manufactured the high explosive put into the cartridge, and that GDATP can only be liable for its own manufacturing defects in connection with the loading, assembling, and packaging of the cartridge (the "LAP" process).³ On this motion for summary judgment, Plaintiffs may defeat the motion by simply raising a genuine issue of fact as to whether GDATP committed an act or omission that caused a defect in the cartridge that exploded in the mortar. Viewing the evidence in the light most favorable to Plaintiffs, the court finds a question of fact as to whether GDATP is responsible for a manufacturing defect. Whether the situation is examined as one involving a process of elimination or the doctrine of res ipsa loquitur, discussed below, there is a genuine issue of fact as to which entity, including GDATP's predecessor, may be responsible for a manufacturing defect. Accordingly, to the extent GDATP moves for summary judgment on Plaintiffs' negligence claims, the motion is denied.

³Plaintiffs did not name TriMas or Holston as Defendants. GDATP filed third-party claims against TriMas and Holston but dismissed those claims on December 24, 2009. See Stipulation [and Order] for Dismissal of Third-Party Claims, Cross-Claims and Counterclaims (Dec. 24, 2009) (Docket No. 275).

2. Strict Liability Claims.

Under Hawaii law, a plaintiff's burden with respect to a claim of strict product liability "is to prove (1) a defect in the product which rendered it unreasonably dangerous for its intended or reasonably foreseeable use; and (2) a causal connection between the defect and the plaintiff's injuries."

Tabieros v. Clark Equip. Co., 85 Haw. 336, 354, 944 P.2d 1279, 1297 (1997). A product may be defective because it was defectively manufactured, was defectively designed, or carried an insufficient warning. See Torres v. N.W. Eng'g Co., 86 Haw. 383, 397, 949 P.2d 1004, 1018 (Ct. App. 1997).

To the extent GDATP seeks summary judgment on Plaintiffs' strict liability claims based on a theory of defective manufacture, GDATP's motion is denied. "A manufacturing defect occurs when, at the manufacturing stage, the product does not conform to the quality of other products of its kind." Wagatsuma v. Patch, 10 Haw. App. 547, 564 n.6, 879 P.2d 572, 583 n.6 (1994). GDATP argues that Plaintiffs' expert, Nixon, cannot conclusively establish what caused the explosion. But conclusive evidence of how the cartridge was defective is not required. All that is required is "a defect in the product which rendered it unreasonably dangerous for its intended or reasonably foreseeable use." Tabieros, 85 Haw. at 354, 944 P.2d at 1297.

The Hawaii Supreme Court has stated:

The nature and quality of evidence used in products liability cases to show the defect and the nexus between the defect and the accident naturally varies. The most convincing evidence is an expert's pinpointing the defect and giving his opinion on the precise cause of the accident after a thorough inspection. If an accident sufficiently destroys the product, or the crucial parts, then an expert's opinion on the probabilities that a defect caused the accident would be helpful. If no such opinion is possible, as in the present case, the user's testimony on what happened is another method of proving that the product was defective. If the user is unable to testify, as where the accident killed him or incapacitated him, no other witness was present at the time of the accident, and the product was destroyed, the fact of the accident and the probabilities are all that remain for the party seeking recovery. At this point the plaintiff can attempt to negate the user as the cause and further negate other causes not attributable to the defendant. These kinds of proof introduced alone or cumulatively are evidence which help establish the presence of a defect as the cause of the damage.

Stewart v. Budget Rent-A-Car Corp., 52 Haw. 71, 76, 470 P.2d 240, 243-44 (1970). Accordingly, Plaintiffs may rely on circumstantial evidence to prove the existence of a defect that caused them injury. Id.; see also Jenkins v. Whittaker Corp., 785 F.2d 720, 731-32 (9th Cir. 1986) (noting that, in most jurisdictions, "purely circumstantial evidence of a defect will suffice to take the case to the jury" provided plaintiffs have introduced evidence that would tend to negate causes of an accident other than a defect in the product and proof suggesting

that the defect in the product was introduced into the product by the defendant).

Under Stewart, Plaintiffs may base their case on Nixon's opinions as to what caused the cartridge to explode inside the mortar, on evidence negating human error as a cause, and on evidence indicating that, in the absence of human error, cartridges do not explode in the mortar. The combination of such evidence may support Plaintiffs' assertion that the mortar cartridge was unreasonably dangerous for its intended use or for its reasonably foreseeable use.

GDATP argues that, because the cartridge was an inherently dangerous product designed for the Army, the cartridge could not have been unreasonably dangerous to members of the public. This argument is unpersuasive. The test for strict liability under Hawaii law is not whether a product is inherently dangerous, but whether it is "unreasonably dangerous for its intended or reasonably foreseeable use." Tabieros, 85 Haw. at 354, 944 P.2d at 1297. GDATP's own expert testified "that the soldiers who fire 81-millimeter mortar shells are entitled to reasonably expect that the shell will not detonate in the cannon." Czachorowski Depo. at 49. Although the Army purchased the cartridges at issue, they were used by soldiers in the Army. It is these soldiers who can be said to be the intended users of the mortar cartridge for purposes of a strict liability claim.

GDATP additionally argues that it cannot be strictly liable for a product it neither created nor sold. GDATP says it undertook only the loading, assembling, and packaging of the cartridge. But GDATP has stipulated that "the mortar shell in question was manufactured in 1982 at the Milan, Tennessee Army Ammunition Plant, and that GDATP is the successor entity responsible for products made during that timeframe in the event the jury finds any potential liability related to the mortar shell at issue." See Plaintiffs' Stipulation for Dismissal Without Prejudice As to Defendant Lockheed Martin Corporation ¶ 9 (emphasis added). Because GDATP has not sufficiently demonstrated on this motion that it is not responsible for having created the allegedly defective mortar cartridge in issue, the court is unconvinced on the record before it that strict liability is inapplicable.

Even assuming that GDATP only loaded, assembled, and packaged the mortar cartridge, holding it responsible for its handling of an unreasonably dangerous product is consistent with the public policies supporting strict liability. The Intermediate Court of Appeals for the State of Hawaii has explained:

Some of the policy considerations underlying the strict liability doctrine are (1) that "a consumer is 'entitled' to assume that a product is intended for its ordinary use and thus, the consumer should recover if harm results[;]" (2) the hope that the

manufacturer will produce safer products; and
(3) the manufacturer can distribute the cost
of compensating the injured consumer among
all consumers.

Waqatsuma, 10 Haw. App. at 566 n.7, 879 P.2d at 584 n.7 (quoting
Note, Unreasonably Dangerous Products From A Child's Perspective:
A Proposal For A Reasonable Child Consumer Expectation Test, 20
Rutgers L.J. 433, 435 (1989)).

Applying admiralty law, the Ninth Circuit has recognized that strict liability extends to defendants who "are an integral part of the overall producing and marketing enterprise that should bear the cost of injuries resulting from defective products." Pan-Alaska Fisheries, Inc. v. Marine Constr. & Design Co., 565 F.2d 1129, 1135 (9th Cir. 1977). Thus, this court has recognized the extension of the strict liability doctrine "to impose liability upon a manufacturer or an assembler who incorporates a defective component part into its finished product and places the finished product into the stream of commerce." Exxon Shipping Co. v. Pac. Res., Inc., 789 F. Supp. 1521, 1526 (D. Haw. 1991). The Hawaii Supreme Court has ruled that, for purposes of strict liability, courts are to make a case-by-case determination of what constitutes a product. See Kaneko v. Hilo Coast Processing, 65 Haw. 447, 455, 654 P.2d 343, 349 (1982). "The 'relevant product' may be the product as a whole or the particular component part or parts which gave rise to the product liability claim." Id.

This case is very much like Foster v. Day & Zimmermann, Inc., 502 F.2d 867 (8th Cir. 1974). In Foster, a member of the Army was injured when a hand grenade exploded in his hand during a training exercise. The grenade had been assembled by the defendant, Day & Zimmermann, Inc., and contained a part manufactured by a co-defendant, Mason & Hanger-Silas Mason Co. Id. at 869. Applying Iowa law, the court ruled that strict liability applied to both defendants. The Eighth Circuit rejected a contention that the grenade was not placed in the stream of commerce because it was manufactured exclusively for and on behalf of the government:

In making the grenade and its component parts the defendants knew that it was made for military personnel and that it was to be used by them. We believe the public interest in human life and health requires the protection of the law against the manufacture of defective explosives, whether they are to be used by members of the public at large or members of the public serving in our armed forces. It is true that the defendants here did not solicit the use of their product, yet they most certainly did reap the profits from its production. When these factors are considered together, the defendants' argument is unpersuasive.

Id. at 871.

The Eighth Circuit also rejected the defendants' contention that they merely sold a service, not a product. Relying on comment F to Section 402A of the Restatement (Second) of Torts, the court recognized that strict liability applies to

"any person engaged in the business of selling products for use or consumption." Id. at 871 (quoting Restatement (Second) of Torts, cmt. F). The defendants were paid for each item they produced. Accordingly, the Eighth Circuit ruled that they were in the chain of distribution of a product supplied for use and consumption by others. Id. at 871.

GDATP raises the same arguments made by the government contractors in Foster. Adopting the Eighth Circuit's reasoning in Foster and recognizing that the application of the strict liability doctrine in this case accords with Hawaii's public policy, this court concludes that Plaintiffs may proceed with their strict liability claims.

3. Res Ipsa Loquitur.

Hawaii courts have stated:

To prevail in a negligence action . . . a plaintiff must adduce sufficient evidence from which reasonable persons might conclude, upon the whole, that it is more likely than not that the plaintiff's injury or accident was caused by the defendant's negligence.

Id. Such evidence may be direct or circumstantial. Id. One type of circumstantial evidence that plaintiffs often rely on to infer a defendant's negligence is commonly referred to as "res ipsa loquitur," a Latin phrase meaning "the thing speaks for itself."

Carlos v. MTL, Inc., 77 Haw. 269, 277, 883 P.2d 691, 699 (Ct. App. 1994). When the res ipsa loquitur doctrine applies, it merely raises a "rebuttable inference which allows a plaintiff to

get his case to the jury." Id. at 281, 883 P.2d at 702. The doctrine raises no presumption of negligence. Instead, it permits but does not compel a determination of negligence. Jenkins, 785 F.2d at 733.

Hawaii courts treat the doctrine "as purely a procedural or evidentiary rule, rather than a substantive rule." Carlos, 77 Haw. at 702, 883 P.2d at 281.

The doctrine of res ipsa loquitur provides that whenever a thing that produced an injury is shown to have been under the control and management of the defendant and the occurrence is such as in the ordinary course of events does not happen if due care has been exercised, the fact of the injury itself will be deemed to afford sufficient evidence to support a recovery in the absence of any explanation by the defendant tending to show that the injury was not due to his want of care. Under the res ipsa loquitur theory, then, the fact of the casualty and the attendant circumstances may themselves furnish all the proof of negligence that the injured person is able to offer or that it is necessary to offer without further proof of the defendant's duty and of his negligence to perform it.

Id. (quotations and punctuation omitted).

Hawaii courts have applied the res ipsa loquitur doctrine in negligence cases involving common carriers, *id.*; when a defendant's property has allegedly damaged a plaintiff's property, Agee v. Kahului Trucking & Storage, Inc., 67 Haw. 365, 688 P.2d 256 (1984); when there has been preventative maintenance, Wakuya v. Oahu Plumbing & Sheet Metal, Ltd., 2 Haw.

App. 373, 636 P.2d 1352 (1981), aff'd 65 Haw. 592, 656 P.2d 84 (1982); and when faulty building construction or demolition work is alleged, Ciacci v. Wooley, 33 Haw. 247, 1934 WL 2701 (Haw. Terr. 1934). Hawaii courts have declined to apply the doctrine when a layperson factfinder would lack competence to conclude, based on common knowledge, that the alleged damage would not have occurred had the defendant exercised proper skill or care. Thus, certain medical malpractice cases require expert testimony on the standard of care. See, e.g., Medina v. Figuered, 3 Haw. App. 186, 647 P.2d 292 (1982).

The Ninth Circuit has permitted the res ipsa loquitur doctrine to be used in a strict liability case under Hawaii law. See Jenkins, 785 F.2d at 733 ("nothing bars application of the res ipsa loquitur theory to strict liability"). The Ninth Circuit reasoned that Hawaii courts have permitted recovery in strict liability "based on *res ipsa*-like theories of circumstantial evidence." Id. (citing Stewart, 52 Haw. at 75, 470 P.2d at 243-44).

GDATP moves for summary judgment on Plaintiffs' res ipsa loquitur claims, arguing that the doctrine is a manner in which negligence and strict liability may be proven, not an independent claim. This court agrees. Accordingly, to the extent the Second Amended Complaint states independent causes of action based on the res ipsa loquitur doctrine, summary judgment

is granted in favor of GDATP. Those claims are duplicative of other causes of action. Eliminating separate res ipsa loquitur claims will prevent possible jury confusion and a potential double recovery.

This ruling in no way bars or limits Plaintiffs from seeking to prove their negligence or strict liability claims through the application of the res ipsa loquitur doctrine. Indeed, the res ipsa loquitur doctrine appears on the present record to apply to the negligence and strict liability claims if human error is negated. To invoke the res ipsa loquitur doctrine, Plaintiffs must establish the following:

1. The event must be one which ordinarily does not occur in the absence of someone's negligence.
2. It must be caused by an agency or instrumentality within the exclusive control of the defendant.
3. It must not have been due to any voluntary action or contribution on the part of the plaintiff.

Carlos, 77 Haw. at 700-01, 883 P.2d at 277-78.

The first element for application of the doctrine states "an obvious principle of circumstantial evidence: that the event must be such that, in the light of ordinary experience, gives rise to an inference that someone must have been negligent." Id. at 700; 883 P.2d at 278. In other words, a plaintiff must show that the event is "of a type that normally

does not occur unless someone has been negligent." Id. (holding that a plaintiff who was injured from a fall while alighting from a bus failed to meet the first element because evidence at trial gave rise to conflicting inferences, one showing defendant's negligence and another showing that the injury occurred absent any negligence). GDATP's expert, Czachorowski, testified that a premature in-bore detonation of a cartridge is something that is not supposed to happen, and that a soldier who fires a cartridge out of a mortar is entitled to reasonably expect that the cartridge will not detonate in the mortar. See Czachorowski Depo. at 49. Plaintiffs have sufficiently demonstrated, for purposes of this motion, that the explosion was not something that normally occurs absent some negligence--either human error or a defect in the cartridge.

The second element for application of the doctrine--exclusive control--merely places a burden on a plaintiff "to trace the injury received to a cause or specific instrumentality for which the defendant was responsible, or to show that the defendant was responsible for all reasonable probable causes to which the accident could be attributed. Whether the plaintiff has sustained this burden is a question of fact, unless the evidence is uncontradicted and does not permit varying inferences." Id. at 701; 883 P.2d at 279. Under Hawaii law, the doctrine "requires a finding of exclusive control and management

of the injury-producing instrumentality only at the time of the negligence, not at the time of the resultant injury." Jenkins, 785 F.2d at 730. As the Eighth Circuit recognized in Foster, 502 F.2d at 872, the "exclusive control" requirement may be satisfied when it is shown that the condition of an item (the grenade in Foster or the mortar cartridge here) was unchanged between the time it left the manufacturer and its use. Plaintiffs avoid summary judgment on this issue by pointing to evidence that the mortar cartridge was unchanged between the time of its production and the time of its use. Id.; see also Di Ricco Depo. at 241 ("A round within the mortar pack is likely to pretty much stay just the way it was as it came out of the plant.").

The third element for application of the doctrine is linked to the second element. "Its purpose is to eliminate the possibility that it was the plaintiff who was responsible for the accident" and to aid the trier of fact "in determining whether it is more probable than not that the defendant was responsible for the occurrence." Carlos, 77 Haw. at 701; 883 P.2d at 279. "If it reasonably appears that the accident might have been caused by the plaintiff's own conduct, the doctrine of res ipsa loquitur would not be applicable to infer the defendant's negligence." Id. Other than a contention that the explosion was caused by a double load, GDATP has not argued that Plaintiffs' own actions contributed to the explosion. As discussed above, there is a

question of fact as to whether the explosion was caused by human error.

Given the above, the court permits Plaintiffs to rely on the res ipsa loquitur doctrine in pursuing their negligence and strict liability claims, but not to advance that doctrine as supporting a separate claim.

C. The Court Denies GDATP's Motion for Summary Judgment Based on the Government Contractor Defense, the Political Question Doctrine, and the Combatant Activities Exception (Docket No. 283) .

The court turns now to GDATP's other summary judgment motion. This second motion advances three legal doctrines as negating Plaintiffs' claims: the government contractor defense, the political question doctrine, and the combatant activities exception. The court concludes that none of these legal doctrines entitles GDATP to summary judgment.

1. The Government Contractor Defense.

The government contractor defense extends the sovereign immunity of the federal government to contractors that comply with specifications set forth in federal defense contracts. See Boyle v. United Technologies Corp., 487 U.S. 500, 511-12 (1988). The government contractor defense is premised on the idea that, when the military requires a contractor to follow precise specifications in building a military product and the contractor steadfastly follows those specifications, it is unfair to hold the contractor liable. It is the government that selects the

design of military equipment, making discretionary policy determinations regarding trade-offs between greater safety and greater combat effectiveness. Courts should not second guess these discretionary determinations in tort actions, as "[i]t makes little sense to insulate the Government against financial liability for the judgment that a particular feature of military equipment is necessary when the Government produces the equipment itself, but not when it contracts for the production." Id.

The Ninth Circuit has extended the government contractor defense to claims challenging the process by which military equipment is produced when the contractor has agreed to operate its facility pursuant to government specifications. See In re Hanford Nuclear Reservation Litig., 534 F.3d 986, 1000 (9th Cir. 2008) ("[T]he government contractor defense applies not only to claims challenging the physical design of a military product, but also to the process by which such equipment is produced.").

To establish that it is protected by the government contractor defense, GDATP must prove that "(1) the United States approved reasonably precise specifications; (2) the equipment conformed to those specifications; and (3) the supplier warned the United States about the dangers in the use of the equipment that were known to the supplier but not to the United States." Boyle, 487 U.S. at 512. Plaintiffs are not arguing that the mortar cartridge was defectively designed or that the process

through which it was manufactured was faulty. Plaintiffs are instead arguing that the single mortar cartridge at issue in this case was defectively manufactured. That is, Plaintiffs contend that the mortar cartridge that prematurely exploded was not produced as required. If the mortar cartridge was defectively manufactured, the government contractor's defense is inapplicable. See McKay v. Rockwell Int'l Corp., 704 F.2d 444, 451 (9th Cir. 1983) (stating in dicta in a defective design case arising out of the crash of a Navy aircraft that the government contractor's defense "does not relieve suppliers of military equipment of liability for defects in the manufacture of that equipment. To hold otherwise would remove the incentive from manufacturers to use all cost-justified means to conform to government specifications in the manufacture of military equipment.").

As discussed above, there is a question of fact as to whether MMASI manufactured the mortar cartridge according to all requirements. GDATP is therefore not entitled to summary judgment based on the government contractor defense.

The court notes that, in the context of this case, the government contractor defense is of limited utility and may unnecessarily complicate issues at trial. There is no contention that the mortar cartridge was defectively designed. The parties appear to agree that the mortar cartridge explosion at issue was

caused by either human error or a defect in the mortar cartridge. If there was a defect in the mortar cartridge that caused the explosion, it does not appear that the mortar cartridge could have satisfied government requirements such that the government contractor defense would apply. On the other hand, if the cartridge satisfied all requirements, then it would not have exploded in the mortar without human error. If human error caused the explosion, the issue of whether the government contractor defense applies is never reached.

2. The Political Question Doctrine.

This court may dismiss an action on the ground that it involves a nonjusticiable political question when one of the following is "inextricable from the case":

a textually demonstrable constitutional commitment of the issue to a coordinate political department; or a lack of judicially discoverable and manageable standards for resolving it; or the impossibility of deciding without an initial policy determination of a kind clearly for nonjudicial discretion; or the impossibility of a court's undertaking independent resolution without expressing lack of the respect due coordinate branches of government; or an unusual need for unquestioning adherence to a political decision already made; or the potentiality of embarrassment from multifarious pronouncements by various departments on one question.

Baker v. Carr, 369 U.S. 186, 217 (1962).

a. This Case Does Not Involve a Textually Demonstrable Commitment of An Issue to the Military.

GDATP argues that this case implicates a nonjusticiable political question because it involves "a textually demonstrable constitutional commitment of the issue to a coordinate political department." This court disagrees.

There is no Ninth Circuit case addressing the justiciability of soldiers' tort claims against a military contractor. In cases addressing the issue, "the key inquiry is whether a court will have to consider the wisdom of military operations and decision-making, or whether it need only consider the private contractor's performance." Getz v. Boeing Co., 2008 WL 2705099, at *6 (N.D. Cal. Jul. 8, 2008). The court must make this determination by considering "how the plaintiffs might prove their claims and how [the defendants] would defend." Id. (citing Lane v. Halliburton, 529 F.3d 548, 565 (5th Cir. 2008)).

Plaintiffs claim that MMASI, GDATP's predecessor, failed to manufacture the mortar cartridge in the way the government directed. In considering whether the mortar cartridge was defectively manufactured, this court need not examine the wisdom of the government's design of the mortar shell or its decision to use a contractor. GDATP's liability turns on whether the mortar cartridge was or was not defectively manufactured, a matter unrelated to the appropriateness any Army policy or "the

wisdom of military operations and decision-making." Getz, 2008 WL 2705099, at *6. Instead, this court will merely examine the manufacturer's performance. Id.

Nor does this case require any evaluation of whether the Army properly trained its soldiers. If human error caused the explosion, GDATP is not liable, regardless of whether such error might have been avoided with better training or supervision.

GDATP argues further that the political question doctrine applies to preclude any possible contradiction of the government's investigation of the explosion. As discussed above, the Army investigators did not conclusively establish the cause of the explosion. GDATP does not establish that contradiction of a government investigation, by itself, insulates a contractor from examination of the contractor's activities. Even if it did, no contradiction is in issue here. Either human error or a defective mortar cartridge caused the accident. A determination as to which is the cause would not contradict the Army investigator's conclusions, as both were contemplated as possible causes of the explosion.

- b. This Court Does Not Lack Judicially Discoverable and Manageable Standards to Resolve this Case.
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GDATP next argues that the court lacks judicially manageable standards because it will be "forced to inquire how a

reasonable government would have designed and provided specifications" for the mortar shell. This argument is as unpersuasive as the previous one.

Plaintiffs' negligence and strict liability claims do not require the court to delve into the reasonableness of military procedures. Plaintiffs' claims seek damages and are therefore easy for the court to resolve based on judicially manageable standards.

Koohi v. United States, 976 F.2d 1328, 1335 (9th Cir. 1992), is instructive. In that case, the Army, using anti-aircraft technology, shot down a civilian Iranian airliner. The Ninth Circuit held that claims against both the government and the manufacturer of the air-defense system were not barred by the political question doctrine. The court stated that "[a] key element in our conclusion that the plaintiffs' action is justiciable is the fact that the plaintiffs seek only damages for their injuries. Damage actions are particularly judicially manageable." 976 F.2d at 1332. The court noted that "the fact that the plaintiffs' lawsuit involves the operation of a United States warship does not render it beyond judicial cognizance." Id. at 1331.

GDATP argues that Koohi is distinguishable because the plaintiffs in that case were civilians. GDATP says that the present case "at its core involves soldiers, tactics, logistics

strategies, and military decision making, as well as a well-established government compensation system that is available to the Plaintiffs.” Motion at 35 n.14. But a Plaintiff’s mere status as a soldier does not bring the case into the political question realm. Plaintiffs seek damages for an allegedly defective mortar cartridge. Plaintiffs neither seek injunctive relief nor question the wisdom of military procedures. This case involves the issue of whether a mortar cartridge was manufactured in violation of government requirements. No political question is implicated.

3. The Combatant Activities Exception.

The Eleventh Amendment provides the federal government with sovereign immunity. This means that a court may only adjudicate an action against the federal government with its consent. See Koohi, 976 F.2d at 1332. The federal government has consented to be sued through a number of acts, including the Federal Tort Claims Act, 28 U.S.C. § 1346(b). But the Federal Tort Claims Act does not completely waive sovereign immunity with respect to tort claims. One area in which the federal government has preserved sovereign immunity concerns combat activities. The combatant activities exception precludes liability when a claim arises out of the combatant activities of military forces during time of war. 28 U.S.C. § 2680(j) (“The provisions of this chapter and section 1346(b) of this title shall not apply to . .

. (j) Any claim arising out of the combatant activities of the military or naval forces, or the Coast Guard, during time of war.”).

The purpose of the combatant activities exception “is to ensure that the government will not be liable for negligent conduct by our armed forces in times of combat.” Koohi, 976 F.2d at 1334. It recognizes that “during wartime encounters no duty of reasonable care is owed to those against whom force is directed as a result of authorized military action.” Id. at 1334.

Although GDATP is not a governmental entity protected by sovereign immunity, it asks this court to apply the combatant activities exception to it. GDATP asserts that this would further the purposes of the exception--eliminating tort duties on the battlefield, preventing state or foreign tort regulation of the federal government’s conduct of war, and freeing military commanders and other personnel from tort litigation. Motion at 42. GDATP “acknowledges that it is requesting an extension of the combat preemption defense in this case.” Reply at 17. GDATP’s attempt to have the exception extended is ill-conceived. The combatant activities exception does not insulate this government contractor under the circumstances presented here.

In Koohi, 976 F.2d at 1336, the Ninth Circuit held that the combatant activities exception barred the plaintiffs’ state-

law design defect claims against private defense contractors.

During the "tanker war" that was part of the Iran/Iraq conflict, a United States Navy cruiser mistook an Iranian civilian aircraft for an Iranian F-14 and shot it down, killing all 290 persons on board the aircraft. Id. at 1330. This occurred shortly after one of the cruiser's helicopters had been fired upon by Iranian antiaircraft guns. Id. The plaintiffs were the heirs of the deceased passengers and crew. The plaintiffs sought to hold the United States liable for the negligent operation of the cruiser and to hold the manufacturers of the Aegis Air Defense System liable for design defects. Although the claims against the private contractors were not barred by sovereign immunity, the Ninth Circuit held that the combatant activities exemption barred the claims.

Examining the protection afforded to the United States by the combatant activities exception, the Ninth Circuit viewed the exception as rooted in three justifications:

First, tort law is based in part on the theory that the prospect of liability makes the actor more careful. Here, Congress certainly did not want our military personnel to exercise great caution at a time when bold and imaginative measures might be necessary to overcome enemy forces; nor did it want our soldiers, sailors, or airmen to be concerned about the possibility of tort liability when making life or death decisions in the midst of combat. Second, tort law is based in part on a desire to secure justice--to provide a remedy for the innocent victim of wrongful conduct. War produces innumerable innocent

victims of harmful conduct--on all sides. It would make little sense to single out for special compensation a few of these persons--usually enemy citizens--on the basis that they have suffered from the negligence of our military forces rather than from the overwhelming and pervasive violence which each side intentionally inflicts on the other. Third, there is a punitive aspect to tort law. Society believes tortfeasors should suffer for their sins. It is unlikely that there are many Americans who would favor punishing our servicemen for injuring members of the enemy military or civilian population as a result of actions taken in order to preserve their own lives and limbs. For these and other reasons, tort law, in toto, is an inappropriate subject for injection into the area of military engagements.

Id. at 1334-35.

In applying the combatant activities exception to the contractors, the Ninth Circuit reasoned that "during wartime encounters no duty of reasonable care is owed to those against whom force is directed as a result of authorized military action." Id. at 1337. The purpose of the equipment alleged to have been defective "may have been, in part, to protect the lives of United States servicemen," but "surely was not to protect the lives of enemy forces or persons associated with those forces." The contractor owed no duty to the persons on an Iranian airplane that had taken off from "an Iranian joint commercial-military airport," was flying "in the area of a combat zone," and failed to communicate its civilian status to United States military forces. Id.

Koohi is inapplicable here. The present case is brought by United States servicemen, not by persons analogous to the Koohi plaintiffs. Indeed, as Koohi suggested that defense contractors do owe a duty of reasonable care to American servicemembers, it seems unlikely the same result would have been reached had American soldiers been the plaintiffs in that case. Nor do the three justifications articulated by the Ninth Circuit for application of the combatant activities exception to the United States have any relevance to the present case. In the training exercise at issue here, the soldiers were not called upon to take "bold and imaginative measures" or to act without exercising "great caution." Plaintiffs were not in actual combat, where innocent victims were to be expected or where there was any need for anyone to be free from concern about tort liability.

One year after the Ninth Circuit decided Koohi, a district court in California applied the combatant activities exception to a defense contractor that had allegedly manufactured a missile in a defective manner. In Bentzlin v. Hughes Aircraft Company, 833 F. Supp. 1486 (C.D. Cal. 1993), the district court held that the combatant activities exception precluded the plaintiffs' claim against the manufacturers of an allegedly defectively manufactured Maverick AGM-65D missile that hit a Marine vehicle in error during the Persian Gulf War, killing its

occupants. Bentzlin applied the combatant activities exception to servicemembers' claims against manufacturers, reasoning that, during times of war, federal interests are implicated when equipment malfunctions. The court reasoned that "secrecy of wartime strategy and military morale" would be undermined if state-law tort actions were allowed to proceed against manufacturers of defective military equipment. The district court stated that, during wartime, manufacturers "should not be made overly cautious in the production and transportation of weapons, since delay may lead to missed strategic opportunities and deaths of American soldiers." Id. at 1493. The district court determined that, just as the government should not be punished for mistakes made during war, government contractors should not be punished. Id. Finally, the district court noted that, during war, there is no difference to the victim between government action and a manufacturing defect. Id.

None of the reasons leading to the Bentzlin decision applies here. No secret wartime strategy must be revealed in this case, and there is no reason to think military morale would be damaged by this lawsuit. This case involves allegations of negligence occurring in 1982, when the mortar shell at issue was made. There is nothing in the record indicating that the manufacturer of the cartridge needed to act in haste because delay might "lead to missed strategic opportunities and deaths of

American soldiers." Id. at 1493. There is no evidence that the manufacturer of the mortar cartridge at issue in the present case was acting during a time of war. To the contrary, the manufacturer appears to have had time to make far more mortar cartridges than were immediately needed. Thus, the mortar cartridge manufactured in 1982 was not actually used until 2006.

This court also notes that the district court in Bentzlin dismissed the plaintiffs' claims on several other grounds, including the government contractor defense, the state secret privilege, and the political question doctrine. The combatant activities exception was an additional but unnecessary ground. In any event, Bentzlin involved circumstances far different from those presented here. This is simply not a case in which the combatant activities exception should be extended.

D. The Request to Strike is Denied.

At the hearing on the present motion, Plaintiffs asked the court to strike the affidavit of Horace Tillman dated December 21, 2009, and the affidavit of Kenneth W. Porter dated December 22, 2009. Plaintiffs say that they have recently deposed Tillman and Porter and that both made untrue statements in their affidavits. Because this court did not rely on either affidavit, the court need not determine whether either affidavit should be stricken.

E. Plaintiffs' Rule 56(f) Request is Denied.

Plaintiffs request a continuance of the hearing before this court pursuant to Rule 56(f) of the Federal Rules of Civil Procedure. That request is denied.

Rule 56(f) permits a district court to continue a summary judgment motion "upon a good faith showing by affidavit that the continuance is needed to preclude summary judgment." California v. Campbell, 138 F.3d 772, 779 (9th Cir. 1998). A party requesting a continuance bears the burden of (1) filing a timely application which specifically identifies relevant information; (2) demonstrating that there is some basis to believe that the information sought exists; and (3) establishing that such information is essential to resist the summary judgment motion. See Employers Teamsters Local Nos. 175 & 505 Pension Trust Fund v. Clorox Co., 353 F.3d 1125, 1130 (9th Cir. 2004) (citation omitted). Plaintiffs do not meet any of these requirements. Moreover, Plaintiffs' request is moot because this court denies GDATP's motions for summary judgment.

V. FUTURE MOTIONS.

In any future motion filed with this court, the parties are directed to make a greater effort to organize their affidavits, declarations, and/or exhibits in a manner that makes them easy to find in the record. The parties should read and comply with the letter and the spirit of Local Rule 10.2(d). In

this case, some of the court's courtesy copies did not contain appropriately labeled tabs. Multiple copies of the same exhibits were included in the papers, and multiple exhibits were identified by the same letter. The parties should communicate with each other about how to label exhibits. For example, if the moving party submits Exhibits A through F, the nonmoving party might consider labeling its exhibits with numerals 1 through 10 or letters G through P.

VI. CONCLUSION.

For the foregoing reasons, the court denies GDATP's motion to exclude the opinions of John Nixon. Because the res ipsa loquitur claims are duplicative of Plaintiffs' negligence and strict liability claims, summary judgment is granted in favor of GDATP on the res ipsa loquitur claims. However, Plaintiffs may attempt to prove their negligence and strict liability claims

at trial by relying on the res ipsa loquitur doctrine. In all other respects, GDATP's motions for summary judgment are denied.

IT IS SO ORDERED.

DATED: Honolulu, Hawaii, March 11, 2010.



/s/ Susan Oki Mollway
Susan Oki Mollway
United States District Judge

Rodriguez v. General Dynamics Armament and Technical Products, Inc., Civ. No. 08-00189 SOM/BMK; Order Denying Motion to Preclude Plaintiffs' Expert's Testimony (Docket No. 338); Order Denying Motions for Summary Judgment (Docket Nos. 283 and 285)